Work Order ID May-13-13 1:12:18 PM			*101	704*					:	Page 1
Item ID: D2053 Revision ID: Item Name: Mounting	ng Bracket A	<u></u>	Accept	*N900	040	100)* s	Setup Star	i A	S1*
Start Date: 5/13/13 Required Date: 5/31/13 Reference:	Start Qty: 0.00	*10* *10*	* 32 *	Cust Item I Customer:	D:				14	
Approvals: Proce	ss Plan: µLJ				ate:			Run Star Stoj	"I V	R1* R2*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr									
D2053	Rev C									
100			0.00							
1 NO Waterjet FLOW CNC Waterjet 5052 090"	FLOW WATER JET Memo 1-Cut as per Dwg Rev:_ Prog Rev:_ ****grain di 2-Deburr if n		0.00				32	0		13.11.07
110	QC2- Inspect parts off ma	•	0.00							

0.00

Memo

110

Quality Control

										DQA:	Date	:
NCR: Y	es / No				WORK ORDER NON-C	ONF	ORN	MANCE / UPDATE		0.4.611	D-4-	
							·			QA Closed:	Date	:
144	<u>ن</u> ــ				DISPOSITION	ı		AGAINST	DE	PARTMENT/	PROCESS	
Work Orde	· · · · · · · · · · · · · · · · · · ·				Rework	ı		Skid-tube Crosstube]	Water Jet	Engineering
Part N	lo				Scrap			Machining Small Fab		Pro	d. Eng. Coor.	Quality
raitiv			= :		Use-as-is	7		oforming Finishing	_	1	e/Packaging	Other
NCR N	lo.				Work Order Update			Large Fab Composite		,	Supplier	1
						'						
Root				Descri	ption of work order update	Init	ial	Action		Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chief	Eng	Description		Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator										ļ		
Material				ļ								
Setup						1						
Other												
Process			Į			1						
Supplier				ļ							!	
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Landi	ng Gear			_	General				_	1	_	¬
	Bending			<u>_</u>	Bend	-	rain		<u> </u>	Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route	\vdash	ardwa		L	Over/Under	<u> </u>	Temperature/Cure
	Cracks				Broken/Damaged	_		on Incomplete	L	Part Incorred		Weld
	Crushed	/Crimped		<u> </u>	Burrs			ions Incomplete/Unclear	<u></u>	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs				Contamination	Щм	lainte	nance	_	Part Moved		
	Heat Tro	at		1	Countersink	1 14	lislahe	leď	1	Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence
Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Work Order ID <i>May-13-13 1:12:18 PM</i>	101704		*1017	′04*					Page 2
Item ID: D2053 Revision ID: "Item Name: Mounting	Bracket	Ассер	t *	N900040	100*	Setup	Start Stop	*NS	\$1* \$2*
Start Date: 5/13/13 Required Date: 5/31/13 Reference:	Start Qty: 10.00 Req'd Qty: 10.00	*10* *10*		Cust Item ID: Customer:					
*	Plan: Date: Date:	A. A	ling:	Date:		Run	Start Stop	*NF	₹1* ₹2*
Sequence ID/ Work Center ID 120 *120 CC Quality Control	Operation Description QC8- Inspect parts - second check Memo	R 0.0	et Up/ tun Homas 00 27 9-89 00 13 11-04	Tool ID Tool #	Plan Acce Code Qty	Qt ₃			Insp. Stamp
*130 *130* Brake NC Brake NC	NC BRAKE Memo Form as per Dwg D2053	0.0 0.0 3 using CNC Brake			32				SB 13/41
*140 *140 QC Quality Control	QC5- Inspect part completeness to st Memo	•	00 DAS 27 9-89		<u>3</u> 2	7 -			

											DQA	.:Date	:
NCR: Y	/es	/ No				WORK ORDER NON-	COI	NFOR	MANCE / UP	DATE			
									-		QA Closed	l: Date	•
Work Orde	or.					DISPOSITION				AGAINST DI	PARTMEN	T/PROCESS	
Work Orde	•					Rework	7		Skid-tube	Crosstube	7	Water Jet	Engineering
Part N	No.					Scrap			Machining	Small Fab	Pr	od. Eng. Coor.	Quality
	•					Use-as-is		Therr	noforming	Finishing	Rec/St	ore/Packaging	Other
NCR N	No.					Work Order Update]		Large Fab	Composite	_	Supplier	
	-		r	<u> </u>			1	 :4:	A	Ai] c: o		
Root Cause		Date	Step	Qty	i	ption of work order update or Non-conformance		Initial nief Eng		tion ription	Sign & Date	Verification	QC Inspector
Doc/Data		Date	Step	Qty	i '	or worr-comormance	+ -	nei Liig	Desc	прион	Date	Vermedion	- QC IIISPECTOI
Equip/Tooling	H												
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Material							İ		İ				
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Process							1						
Supplier		•										İ	
Training	$oxed{oxed}$												
Unapproved			<u> </u>				1		<u> </u>				
							AUI	LT CATE	GORY				· · · · · · · · · · · · · · · · · · ·
. Landi	ng (1			_	General		7		_	7	_	¬
		Bending			<u> </u>	Bend		Grain		<u> </u>	Ovalized	<u> </u>	Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route	<u> </u>	Hardwa		<u> </u>		er tolerance	Temperature/Cure
	1	Cracks				Broken/Damaged	1	Inspect	ion Incomplete	i	Part Incorr	ect	Weld

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

Wrong Stock Pulled

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence
Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Work Orde May-13-13 1:12		101704		*101	704*					,	Page 3
Revision ID:	D2053	g Bracket		Accept	*N900	040	100*	Se	tup Start Stop	*NS	1* 2*
Start Date: Required Date: Reference:	5/13/13 5/31/13	Start Qty: 10.00 Req'd Qty: 10.00	*10* *10*		Cust Item I Customer:	D:					
Approvals:		s Plan:	Date:			ate:		Rı	un Start Stop	"NK	1* 2*
Sequence ID/ Work Center II 150 *150* HandFinish Hand Finishing)	Operation Description Chemical Conversion Coa	t per QSI005 4.1	Set Up/ Run Hours 0.00	Tool ID	Tool #	Code (accept Oty	Qty		sp. amp
*160 *160* Powdercoat Powder Coating		Black Sandtex (Ref. 4.3.5.7 MII 7 335 Memo START TIME OVEN TEME FINISH TIME	e: 5:5 Perature: 33 5**	0.00			<u>.</u>	32.	Ø	13-11-2	<i>10</i> _
170 *170* QC Quality Control		QC3- Inspect Part Finish Memo		0.00 DAS 9-89 0.00 S	20		3	62			

OAS 34 9-89

NCR: Y	es/	/ No				WORK ORDER NON-	COI	NFORN	MANCE / UPDATE				
									-		QA Closed:	Date	: <u></u>
Work Orde	er:					DISPOSITION			AC	GAINST DE	PARTMENT	PROCESS	
Part N	- - lo					Rework Scrap Use-as-is Work Order Update	L	Therm	Machining Sm noforming Fi	nall Fab nishing nposite	_	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
, item	•••-					Work Order Opdate	ا ك		Large rabcon	posite	J 	30ppne.	
Root Cause		Date	Step	Qty		ption of work order update or Non-conformance	1	Initial nief Eng	Action Description	1	Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								LT CATE	CORY				
Landi	na G	A37				General	AUI	LICATE	GURT				
Landii		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples ir	Crimped at n Strip in 1 Bend	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/Uncleadenance eled	r	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	1 1	Torque V	/aves in (Extrusio	n l	Drawing	1.	[Out of C	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

			•								
Work Ord <i>May-13-13 1:1</i>				*101	1704*	-7- :4		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Page 4
Item ID: Revision ID: Item Name:	D2053 Mounting	g Bracket		Accept	*N900	040	100)* 5	Setup Star	i VI	S1* S2*
Start Date: Required Date Reference:	5/13/13 : 5/31/13	Start Qty: 10.00 Req'd Qty: 10.00		10* 10*	Cust Item I Customer:	D:					
Approvals:	Process QC:	s Plan:	Date:			ate:	-	1	Run Star Stoj		R1* R2*
Sequence ID/ Work Center I	D	Operation Description Identify as per dwg & St	ock Location	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 Packaging Packaging		Memo		0.00				301	(13-11- DAS

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

190

190

Quality Control

- 13/10/20 / 48

pl 13-11-20

											DQA:	Dat	e:	
NCR:	⁄es	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE		•			
									-		QA Closed:	Dat	e:	
Morle Orde						DISPOSITION			AGAI	NST DE	PARTMENT	/PROCESS		
Work Orde	er: .					Down white	7		Skid-tube Crosst	م	1	Water Jet	\neg	Engineering
Onet A	1.					Rework	-		<u> </u>		Dro	d. Eng. Coor.	┦ '	Quality
Part N	NO					Scrap Use-as-is	-		Machining Small Small Finish		l	re/Packaging	\dashv	Other
NCR N	No.					Work Order Update	-		Large Fab Compo	~}—	nec/sto	Supplier	\dashv	
INCIT	١٠٠.						L		Large rab Compo	31CC	İ	Juppher		
Root					Descri	ption of work order update	T	Initial	Action		Sign &		T	
Cause		Date	Step	Qty	(or Non-conformance	Cr	ief Eng	Description		Date	Verification	<u>1 </u>	QC Inspector
Doc/Data														
Equip/Tooling														
Operator							1							
Material														
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Process							1				Ì			
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Landi	ng (Gear			_	General	_	-		_	•	-		
		Bending				Bend		Grain			Ovalized		_	ressure/Forced
	L	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance		emperature/Cure
	-	Cracks			L	Broken/Damaged		⊣ '	on Incomplete		Part Incorre	}	_	/eld
		Crushed/	Crimped			Burrs	_	Instruct	ions Incomplete/Unclear		Part Lost/M	issing]w	rong Stock Pulled
·	1	Cuffs			i	Contamination	1	Mainte	enance	Ī	Part Moved			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Work Order ID:

101704

Parent Item:

D2053

Parent Item Name:

Mounting Bracket

Start Date: 5/13/13

Required Date: 5/31/13

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP D02.03.18Added Rev.B NG(Issue this IPP with part number D2052)

IPP Rev:E now water jet 07-10-25 DD

IPP Rev:F 08-05-14 chg to revC as per ECN1171 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.090 5052-H32 .090 Sheet		Purchased	No			100	sf	100.2600	0.0385	0.405263	Au	, 4+	/3. c
				Location		Loc Qty	<u>Lo</u>	c Code				13	، ۱۱۰ د
				MAT022		100.26							
				118	641	20.26							
				121	780	16							~ P~
				125	552	64			12	5552		> /.	28

DQA: _____ Date: _____

NCR:	Voc	1	No
NCK:	Yes	/	No

WORK ORDER NON-CONFORMANCE / UPDATE

											QA Closed:	Da	te:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS		
Part N	 lo		-			Rework Scrap Use-as-is Work Order Update		1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. re/Packaging Supplier	_	Engineering Quality Other
Root					Descri	ption of work order update	l li	nitial	Ac	tion	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Chi	ief Eng	Desc	ription	Date	Verificatio	n	QC Inspector
Doc/Data														
Equip/Tooling	\neg				•									
Operator	\neg													
Material		_												
Setup													ļ	
Other	П								ļ				ı	
Process		3												
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Training														
Unapproved														
						F	AUL	T CATE	GORY					
Landi	ng Ge	ar				General								
	Пв	Bending				Bend		Grain			Ovalized			Pressure/Forced
		entre No	ot Conce	ntric to	o/s	BOM/Route	П	Hardwa	are		Over/Under	tolerance	Пд	emperature/Cure
	П	cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	□v	Weld
	П	crushed/0	Crimped			Burrs		Instruct	tions Incomplete/	Unclear	Part Lost/Mi	issing	□ v	Wrong Stock Pulled
	П	Cuffs				Contamination		Mainte	enance		Part Moved			
	 -	leat Trea	it			Countersink		Mislabe	eled		Positioned V	Vrong		
		nspection	n Strip in	Tube		Cut Too Short		Misrea	d		Power Loss/	Surge		Other
		Ripples in	Bend			Drill Holes		Offset		_				
	[]	orque W	aves in 8	xtrusio	n 🗌	Drawing		Out of	Calibration					
	□	Turning S	equence			Finish		Out of	Sequence					
	\Box	Nave/Tw	ist in Tu l	эе		Folio		Outside	e Dimensions					

DART AEROSPACE LTD	Work Order:	101704
Description: Bracket	Part Number:	D2053
Inspection Dwg: D2053 Rev: C		Page 1 of 1

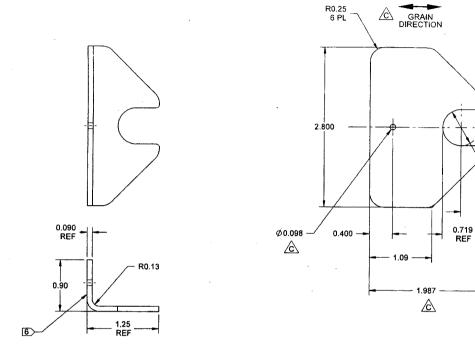
FIRST ARTICLE INSPECTION CHECKLIST

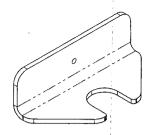
Х	First Article	Prototype	•
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	1098	-		٧	UKM-01
0.400	+/-0.010	4.00	_		V	
1.09	+/-0.030	1.09			V	·
0.719	+/-0.010	,719			V	
1.987	+/-0.010	1,990	~		V	
1.00	+/-0.030	1.00	-		V	
Ø0.635	+0.008/-0.001	, 635	_	,	RG	
2.800	+/-0.010	2.800	-		>	
0.090	+/-0.010	.090	_		V	
			<u></u>			
	· · · · · · · · · · · · · · · · · · ·					
			DAS			

			27			
Measured by:	Ac	Audited by:	9-89	Prototype Approval:	N/A	
Date:	13.11.03	Date:	15/1-04	Date:	N/A	
			 			٠.

Rev	Date	Change	Revis	ed b	y	Approved	
Α	. 09.06.01	New Issue	KJ	4		ZX	
				-7			





13-05-14 PELEASED

D2053 BRACKET

D2053F FLAT PATTERN

R0.06 1.00

Ø0.635±0.005 0.402

NOTES:
1) MATERIAL: 5052-H32 ALUMINUM SHEET 0.090 THICK PER QQ-A-250/8 OR AMS 4016
(REF DART SPEC M5052H32S.090)
OR
6081-T6 (OR -T62) ALUMINUM SHEET 0.090 THICK PER QQ-A-250/11 OR AMS 4025/4027
(REF DART SPEC M6061T6S.090)
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT BLACK (4.3.5.7) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2053" USING FINE POINT PERMANENT INK MARKER OR LABEL AFTER FINISH
7) WEIGHT: 0.04 lbs

	GRAIN DIRECTION (ZN D5-1); QTY (2) Ø0.213 MOUNTING HOLES REMOVED; REASON: PRODUCT IMPROVEMENT		
В	Ø 0.635 WAS Ø 0.437; 0.635 WAS 0.325	DS	02.03.12
Α	NEW ISSUE	DS	92.01.12
REV.	DESCRIPTION	BY	DATE
DESIGN	D 4 27 4 52 0 0 2		-

DESIGN de-		DART AEROSPACE LTD				
DRAWN	P4	HAWKESBURY, ONTARIO, CANADA				
CHECKED	18	DRAWING NO.		REV. C		
MFG. APPR.		D2053		SHEET 1 OF 1		
APPROVED	4	TITLE		SCALE		
DE APPR.		BRACKET		NTS		
D.80 TATE	04.25	COPYRIGHT © 1992 BY DART AEROSPACE LTD THE DOCUMENT IN PRESS ON THE STREET CONDITION THAT IT IS NOT TO BE USED FOR ANY PREFORE ON COMPANY DATE OF THE STREET ON THAT IT IS NOT TO BE USED FOR ANY PREFORE ON COMPANY DATE OF THE PERSON WETFOUT				